

H₂-High Pressure Sensor HPS

For high pressure applications and tank systems



Product description



Our high pressure sensor HPS was specially designed for the use in hydrogen (H₂) applications, such as filling stations and high pressure tanks, as well as measuring and testing technology.

Our HPS sensors are designed for the two nominal pressure ranges of 0 to 500 bar and 0 to 900 bar for measuring system and tank pressure in stationary or mobile applications.

Materials that come into contact with fluids have been selected in accordance with the requirements for use with hydrogen and withstand the high stresses of use in hydrogen environments, even over long service lives. The HPS sensors are certified according to the H₂ norms EC79 and HGV 3.1.

For an optimal integration in systems, the sensor is available with analog or digital (SENT/ LIN) output signal.

Fields of application

- High pressure tanks and reservoirs
- Filling and refueling stations
- Measure and testing technology

Features

High-pressure hydrogen measurement up to 900 bar

- Robust for measuring pressures up to 900 bar
- Monobloc measuring element with no welds

Very good hydrogen compatibility

- Use of fluid-compatible materials
- Burst-proof and long service life
- Certified according to EC79 and HGV 3.1

Several design variants available

- Analog output voltage as well as SENT and LIN output
- Various connection threads, metric and UNF
- High-pressure sensor with conical sealing

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Technical Specification

Measurement range

Nominal pressure	0–500 bis 0–900 bar
Over pressure	750 bar/1050 bar
Burst pressure	1250 bar/1750 bar
Pressure type	Relative

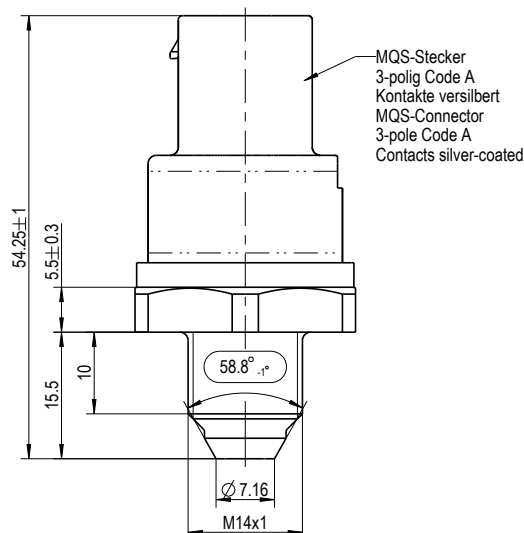
Electrical characteristics

Supply voltage	5 V±0.25 V (12 V LIN)
Current consumption	max. 10 mA
Output signals	SENT, analog, LIN

Mechanical characteristics

Measuring element	Monopart with directly applied thick-film
Housing material	Stainless steel
Pressure connection	M14×1, conical sealing (metal on metal) or 7/16–20 UNF (o-ring)

Dimensions



Thread	Male thread
Electrical connection	3-pin MQS connector
Installation position	Any
Weight	approx. 37 g

Accuracy

Total error	Standard accuracy ±1.0% FS @ 0–50°C, ±1.5% FS @ –40–85°C, up to ±0.5% FS @ –40–85°C
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Environmental conditions

Operating temperature range	–40–85 °C
Media temperature range	–40–85 °C
Media compatibility	Hydrogen, air, nitrogen, coolant (DI-water, ethylene glycol)

